

CLAIMS

1. An upgraded heavy oil characterized by the following properties:
 - i) an API gravity from about 13 to about 23;
 - ii) a density at 15°C from about 0.92 g/ml to about 0.98 g/ml;
 - iii) a viscosity at 40°C, cSt, from about 15 to about 300;
 - iv) a reduced Vanadium content of about 60 to about 100 ppm; and
 - v) a reduced Nickel content of about 10 to about 50 ppm.
2. An upgraded bitumen characterized by the following properties:
 - i) an API gravity from about 10 to about 21;
 - ii) a density at 15°C from about 0.93 g/ml to about 1.0 g/ml;
 - iii) a viscosity at 40°C, cSt, from about 15 to about 300;
 - iv) a reduced Vanadium content of about 60 to about 100 ppm; and
 - v) a reduced Nickel content of about 10 to about 50 ppm.
3. A liquid product characterized in having at least one of the following properties:
 - i) less than 50% of the components evolving at temperatures above 538°C during simulated distillation;
 - ii) from about 60% to about 95% of the product evolving below 538°C during simulated distillation;
 - iii) from about 1.0% to about 10% of the liquid product evolve below 193°C during simulated distillation;
 - iv) from about 2% to about 6% of the liquid product evolve between 193-232°C during simulated distillation;
 - v) from about 10% to about 25% of the liquid product evolve between 232-327°C during simulated distillation;
 - vi) from about 6% to about 15% of the liquid product evolve between 327-360°C during simulated distillation; and

vii) from about 34.5% to about 60% of the liquid product evolve
between 360-538°C during simulated distillation.

5 4. A VGO characterised with a measured aniline point from about 110°F to
about 130°F, and a calculated aniline point from about 125°F to about 170°F.

10 5. The VGO of claim 4, further characterized by having a hydrocarbon profile
comprising about 38% mono-aromatics.